



# Cisco Expressway and Cisco Expressway Select Release Note (X14.2.7)

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**First Published:** 2023-06-07

**Last Modified:** 2023-06-09

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## Change History

**Table 1: Change History**

Date	Change	Reason
June 2023	Republished X14.2.7	Expressway and Expressway Select X14.2.7 release. <ul style="list-style-type: none"> <li>• Made changes to the section "ESXi Requirements".</li> <li>• Included a new section "Accessibility and Compatibility Features".</li> </ul>
June 2023	First publication for Expressway and Expressway Select X14.2.7	Expressway and Expressway Select X14.2.7 release
May 2023	First publication for Expressway Select X14.2.6	Expressway Select X14.2.6 release
May 2023	First publication for Expressway Select X14.2.5	Expressway Select X14.2.5 release
April 2023	First publication for X14.2.6	X14.2.6 release
February 2023	First publication for X14.2.5	X14.2.5 release
December 2022	First publication for X14.2.2	X14.2.2 release
October 2022	First publication for X14.2.1	X14.2.1 release
August 2022	Republished X14.2	X14.2 release Replaced Bug ID
August 2022	First publication for X14.2	X14.2 release

## Supported Platforms

**Table 2: Expressway Platforms Supported in this Release**

Platform name	Serial Numbers	Scope of software version support
Small VM (OVA)	(Auto-generated)	X8.1 onwards
Medium VM (OVA)	(Auto-generated)	X8.1 onwards
Large VM (OVA)	(Auto-generated)	X8.1 onwards

Platform name	Serial Numbers	Scope of software version support
CE1200 Hardware Revision 2 (pre-installed on UCS C220 M5L)	52E1#####	X12.5.5 onwards
CE1200 Hardware Revision 1 (pre-installed on UCS C220 M5L)	52E0#####	X8.11.1 onwards
CE1100 (Expressway pre-installed on UCS C220 M4L)	52D#####	Not supported (after X12.5.x) except limited support with X12.6.x versions for maintenance and bug fixing purposes only. Vulnerability/Security support is extended until November 30, 2023.
CE1000 (Expressway pre-installed on UCS C220 M3L)	52B#####	Not supported (after X8.10.x)
CE500 (Expressway pre-installed on UCS C220 M3L)	52C#####	Not supported (after X8.10.x)

## ESXi Requirements

The following are the ESXi-supported versions.

- **From X14.2 release and later versions**, EXSi 6.5 Update 2a, ESXi 7.0 Update 3, ESXi 7.0 Update 3c, and ESXi 7.0 Update 3d are supported.
- **From X14.2.6 release and later versions**, EXSi 6.5 Update 2a, ESXi 7.0 Update 3c, ESXi 7.0 Update 3d, and ESXi 8.0 are supported.




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**Note** VMware withdrew the following supported versions: ESXi 7.0 Update 3, 3a, and 3b due to critical issues identified with those builds. (**Reference:** [Link](#)).

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## Change Notices

### Smart Licensing - Unrestricted (Capped Version)

#### Signaling to no more than 2500 endpoints

Expressway is a media gateway and must provide media encryption or encrypted signaling to **no more than 2500 endpoints**. *This restriction will be effective in the X14.2 release of the Cisco Expressway.*




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**Note** The CAP of 2500 secured/crypto sessions are also applicable to Cisco TelePresence Video Communication Server (VCS) Series.

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Encrypted signaling to endpoints refers to SIP registrations or SIP calls, H.323 registrations or calls, WebRTC calls, and XMPP registrations.




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**Important**

- Ensure that the limited number of encrypted signaling is **not** more than 2500 endpoints per instance of Expressway. A customer that needs to exceed this limit may deploy additional peers/clusters if entitled, to provide additional capacity.
  - CCO does not perform a “license determination check”. So existing customers will only have access to the limited/capped version.
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For PID Details and Ordering Guide, see [Appendix 1: Get More Information](#).

## Smart Licensing Export Compliance - Restricted (UnCapped Version)

Cisco is committed to maintaining strict compliance with all global export laws and regulations.

Cisco Expressway Select is an export-restricted image that can exceed 2,500 encrypted signaling sessions.

Every software release must comply with all relevant Export Control legislation - the US and local country regulations that control the conditions under which certain software and technology may be exported or transferred to other countries and parties.




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**Note**

There is no encrypted session limit/capping on the number of registrations/calls/sessions (hardware limit still applies). For more information, see [Cisco Expressway Administrator Guide](#).

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**Important**

CCO does not perform a “license determination check”. So existing customers will only have access to the Export Unrestricted image. Users must submit a new \$0 order (PID L-EXPWY-14.X-K9=) for an export-restricted image exceeding 2500 encrypted signaling sessions.

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### Upgrade Approach

The following upgrades are allowed.

- Expressway → Expressway Select
- Or
- Expressway Select → Expressway

For PID Details and Ordering Guide, see [Appendix 1: Get More Information](#).

## Deploying OVA with VMware 7.0 U2



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**Note** This is a known issue in the current release. Deploying X14.2 OVA shows “Invalid Certificate” on vCenter 7.0 U2 version of VMware, though it shows “Trusted Certificate” in older versions. Refer to [Knowledge Article](#) for more information about the issue.

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## VCS Product Support

Cisco has announced **end-of-sale** and **end-of-life** dates for the Cisco TelePresence Video Communication Server (VCS) product. Details are available at the following [link](#).

This notice does not affect the Cisco Expressway Series product.

## Hardware Support for CE1200, CE1100, CE1000, and CE500 Appliances

This section applies to **hardware** support services only.

### CE1200 Appliance



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**Important** Supply issues with components used in the Expressway CE1200 are delaying orders. In light of the supply issues, we are extending the end of Vulnerability/Security support until November 30, 2023.

Please ignore the warning “**unsupported hardware**” in the User Interface.

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### CE1100 Appliance - End-of-Life and Advance Notice of hardware service support withdraw

In light of ongoing issues with component shortages that are affecting the timely supply of new Expressway appliances, to support those customers still using Cisco Expressway CE1100 appliances, Cisco has taken the decision to extend the End of Vulnerability/Security Support from November 14, 2021 (as per the original [End-of-Life announcement](#)) to November 30, 2023, in line with the last date of support, for those customers with a valid service contract.



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**Note** Although customers may run this release of software on the Expressway CE1100 and benefit from security improvements/vulnerability fixes, many new features require newer, more powerful hardware and as a result, new features/functionality added in this release of the Expressway software are not supported for use on the CE1100 platform.

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### CE500 and CE1000 Appliances - End-of-Sale Notice

The Cisco Expressway CE500 and CE1000 appliance hardware platforms are no longer supported by Cisco. See the [End-of-sale announcement](#) for more details.

# Interoperability and Compatibility

## Product Compatibility Information

### Detailed matrices

Cisco Expressway is standards-based and interoperates with standards-based SIP and H.323 equipment both from Cisco and third parties. For specific device interoperability questions, contact your Cisco representative.

### Mobile and Remote Access (MRA)

Information about compatible products for MRA specifically, is provided in version tables for endpoints and infrastructure products in the [Mobile and Remote Access Through Cisco Expressway Deployment Guide](#).

For MRA, to access the latest features and functionality, it's recommended that Expressway is deployed in conjunction with the latest version of UCM. However, Expressway is backwards compatible with earlier UCM releases as well.

## Which Expressway Services Can Run Together?

The [Cisco Expressway Administrator Guide](#) details which Expressway services can coexist on the same Expressway system or cluster. See the table “*Services That Can be Hosted Together*” in the **Introduction** chapter. For example, if you want to know if MRA can coexist with CMR Cloud (it can) the table will tell you.

## Feature Summary for X14.2.7

*Table 3: Features by Release Number*

Feature / Change	Status
Enabling or Disabling CDB API Access	Supported from X14.2
TLS Verification Mode	Supported from X14.2
Upload files along /tmp/ path	Supported from X14.2
Smart Licensing Phase II	Supported from X14.2
MRA over IPv6	Supported from X14.2
XCP Routing Information	Supported from X14.2
Approved Cryptographic Primitives and Parameters	Supported from X14.2
Enable DOS Protection for TrafficServer	Supported from X14.2
Reduce Email Notifications	Supported from X14.2
Alternate Method of Using xCommand FIPS	Supported from X14.2

Feature / Change	Status
RedSky E911 Location Services	Supported from X14.0.4
Service Select Wizard	Supported from X14.0.3
Ban/Unban an IP Address	Supported from X14.0.3
Exempt an IP Address	Supported from X14.0.3
Call Detail Record (CDR) Configuration	Supported from X14.0.3
Multiple Admin Accounts and Groups can have CLI access.	Supported from X14.0.1
Ability to configure SNMP details in the new RAML REST API.	Supported from X14.0.1
Ability to view and acknowledge the alarms using command interface	Supported from X14.0.1
Redirect URI support for SSO/OAuth sign-in	Supported from X14.0
AV1 Support	Supported from X14.0
XCP support for “Jabber Zero Downtime”	Supported from X14.0
Escalation from P2P to Meeting	Supported from X14.0
Expressway Cluster load balancing not applicable to SIP Federation	Supported from X14.0
MRA SIP Registration Failover for Cisco Jabber	Supported from X14.0
MRA Mobile Application Management clients	Preview
Android Push Notifications for IM&P	Preview (disabled by default from X12.6.2)
Headset Capabilities for Cisco Contact Center	Preview

## Withdrawn or Deprecated Features and Software

The Expressway product set is under continuous review and features are sometimes withdrawn from the product or deprecated to indicate that support for them will be withdrawn in a subsequent release. This table lists the features that are currently in deprecated status or have been withdrawn since X12.5.

**Table 4: Withdrawn or Deprecated Features**

Feature / Software	Status
Hardware Security Module (HSM) Support	Withdrawn from X14.2
Support for Microsoft Internet Explorer browser	Deprecated from X14.0.2

Feature / Software	Status
VMware ESXi 6.0 (VM-based deployments)	Deprecated
<p>Cisco Jabber Video for TelePresence (Movi)</p> <p><b>Note</b> Relates to Cisco Jabber Video for TelePresence (works in conjunction with Cisco Expressway for video communication) and not to the Cisco Jabber soft client that works with Unified CM.</p>	Deprecated
FindMe device/location provisioning service - Cisco TelePresence FindMe/Cisco TelePresence Management Suite Provisioning Extension (Cisco TMSPE)	Deprecated
Expressway Starter Pack	Deprecated
Smart Call Home preview feature	Withdrawn X12.6.2
Expressway built-in forward proxy	Withdrawn X12.6.2
Cisco Advanced Media Gateway	Withdrawn X12.6
VMware ESXi 5.x (VM-based deployments)	Withdrawn X12.5

## No Support for Ray Baum's Act

Expressway is not a Multiline Telephone System (MLTS). Customers that need to comply with the requirements of [Ray Baum's Act](#) should use Cisco Unified Communication Manager in conjunction with Cisco Emergency Responder.

## Related Documentation

**Table 5: Links to Related Documents and Videos**

Support videos	Videos provided by Cisco TAC engineers about certain common Expressway configuration procedures are available on the <a href="#">Expressway/VCS Screencast Video List</a> page (search for "Expressway videos").
Installation - virtual machines	<i>Cisco Expressway Virtual Machine Installation Guide</i> on the <a href="#">Expressway Installation Guides</a> page.
Installation - physical appliances	<i>Cisco Expressway CE1200 Appliance Installation Guide</i> on the <a href="#">Expressway Installation Guides</a> page.
Basic configuration for single-box systems	<i>Cisco Expressway Registrar Deployment Guide</i> on the <a href="#">Expressway Configuration Guides</a> page.



Basic configuration for paired-box systems (firewall traversal)	<i>Cisco Expressway-E and Expressway-C Basic Configuration Deployment Guide</i> on the <a href="#">Expressway Configuration Guides</a> page.
Administration and maintenance	<i>Cisco Expressway Administrator Guide</i> on the <a href="#">Expressway Maintain and Operate Guides</a> page (includes Serviceability information).
Clustering	<i>Cisco Expressway Cluster Creation and Maintenance Deployment Guide</i> on the <a href="#">Expressway Configuration Guides</a> page.
Certificates	<i>Cisco Expressway Certificate Creation and Use Deployment Guide</i> on the <a href="#">Expressway Configuration Guides</a> page.
Ports	<i>Cisco Expressway IP Port Usage Configuration Guide</i> on the <a href="#">Expressway Configuration Guides</a> page.
Mobile and Remote Access	<i>Mobile and Remote Access Through Cisco Expressway Deployment Guide</i> on the <a href="#">Expressway Configuration Guides</a> page.
Cisco Meeting Server	<i>Cisco Meeting Server with Cisco Expressway Deployment Guide</i> on the <a href="#">Expressway Configuration Guides</a> page. <i>Cisco Meeting Server API Reference Guide</i> on the <a href="#">Cisco Meeting Server Programming Guides</a> page. Other <i>Cisco Meeting Server Guides</i> are available on the <a href="#">Cisco Meeting Server Configuration Guides</a> page.
Cisco Webex Hybrid Services	<a href="#">Hybrid services knowledge base</a>
Cisco Hosted Collaboration Solution (HCS)	<a href="#">HCS customer documentation</a>
Microsoft infrastructure	<i>Cisco Expressway with Microsoft Infrastructure Deployment Guide</i> on the <a href="#">Expressway Configuration Guides</a> page. <i>Cisco Jabber and Microsoft Skype for Business Infrastructure Configuration Cheatsheet</i> on the <a href="#">Expressway Configuration Guides</a> page.
Rest API	<i>Cisco Expressway REST API Summary Guide</i> on the <a href="#">Expressway Configuration Guides</a> page (high-level information only as the API is self-documented).
Multiway Conferencing	<i>Cisco TelePresence Multiway Deployment Guide</i> on the <a href="#">Expressway Configuration Guides</a> page.

## Feature and Changes in X14.2.7

### Security Enhancements

Various security-related improvement(s) apply in this release as part of ongoing security enhancements. Much of this is behind the scenes, but some changes affect the user interfaces or configuration.

### Upload files along /tmp/ path

You must upload files along **/tmp/** path to keep the file upload process secure.

For example, Consider the following command. Use **/tmp/** at the beginning of the path:

```
xcommand Passworddictionarywrite /tmp/random_file
```

### Enable DOS Protection for TrafficServer

There are default rate limits set for new connections on SIP and EDGE traffic categories Management category is also included in a monitoring capacity allowing visibility and logging of connection events above the configured level.

### Approved Cryptographic Primitives and Parameters

Expressway does not support Anonymous Diffie Hellmen (ADH) cipher for SIP services, so TC/CE endpoints must enable certificate for SIP (Self-signed Certificate must be in *On* mode).

## Management Enhancements

### Smart Licensing

Cisco Smart Software Licensing is a new way to think about licensing.




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**Note** Cisco Expressway Release X14.2 and later **only** supports Smart Licensing. Versions prior to X14.2.7 were capped at 2500 encrypted signalling sessions to endpoints. It also includes changes in the trafficserver behavior (bug ID [CSCwc69661](#) refers) that can lead to MRA failures - see [here](#). For detailed information, see the *Cisco Expressway and Cisco TelePresence Video Communication Server Release Note (x14.2)* and *Cisco Expressway Administrator Guide (X14.2) before upgrading to X14.2*.

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This method is typically managed with the cloud-based Cisco Smart Software Manager (CSSM). Alternatively, deployments that need an on-premises approach can use the Smart Software Manager On Prem product (Formerly known as “Smart Software Manager Satellite”).

Smart Licensing provides customers with the flexibility to consume their licenses from any Expressway node or cluster that they have.

You can use Smart Licensing to:

- See the license usage and count.
- See the status of each license type.
- See the product licenses available on Cisco Smart Software Manager or Smart Software Manager On-Prem.
- Renew License Authorization with Cisco Smart Software Manager or Smart Software Manager On-Prem.
- Renew Registration
- Deregister with Cisco Smart Software Manager or Smart Software Manager On-Prem.
- Reregister License with Cisco Smart Software Manager

**Important**

- Product Activation Keys (PAK) Licensing (Option Keys) are removed from version X14.2.
- Smart License is default and the only licensing mode for Expressway-C and Expressway-E.
- In Smart License mode, the functionality is enabled by default and hence they are not needed or supported and may not be converted in the [License Registration Portal](#).

## Types of Cisco Smart License Reservation

Cisco Smart License Reservation means to reserve licenses and install them on the device. This process enables you to generate a unique reservation code from your Cisco device, which is then used to reserve a license type and quantity from your Cisco Smart Account's inventory.

The following are the license reservation types:

- **Permanent License Reservation (PLR):** All licenses are reserved.
- **Specific License Reservation (SLR):** Only specific licenses are reserved.

For details on the Cisco Smart License Reservation and Its Types, see the section on *About Cisco Smart License Reservation and Its Types* in [Cisco Expressway Administrator Guide \(X14.2\)](#).

### Command Line Interface Updates

The following new CLI commands have been introduced to support this feature:

- `xconfiguration License Smart ReservationEnable: On`
- `xcommand License Smart Reservation Request`
- `xcommand License Smart Reservation Install <authorization code>`
- `xcommand License Smart Reservation Return`
- `xcommand License Smart Reservation ReturnAuthorization <auth code>`
- `xcommand License Smart Reservation Cancel`



**Note** The following commands are common for both Permanent License Reservation (PLR) and Specific License Reservation (SLR).

For details on the list of CLI Commands for PLR and SLR, see the section on *CLI Commands for PLR and SLR* in [Cisco Expressway Administrator Guide \(X14.2\)](#).

### Permanent License Reservation

Permanent License Reservation (PLR) is a part of Cisco smart licensing solution. Smart Licensing requires a smart account. The product must connect to the Cisco Smart Software Management (CSSM) or Smart Software Manage (SSM On-Prem) in order to reactivate and report the most recent license status. You will use Cisco Permanent License Reservation or PLR license if you have extremely secured inner networks with restricted internet access.

You can apply Permanent licenses over evaluation licenses, and also apply it incrementally (that is, you can have multiple permanent licenses, and so on). Its capabilities are designed for highly secure environments, where communication with an outside environment is impossible.

For details on how to configure Cisco Permanent License Reservation, see the section on *Permanent License Reservation* in [Cisco Expressway Administrator Guide \(X14.2\)](#).

### *Specific License Reservation*

Specific License Reservation is a feature that is used in highly secure networks with no ability at any time to connect to Cisco Smart Software Manager or Cisco Smart Software Manager On-Prem. It provides a method for customers to deploy a software license on a device (Product Instance - Expressway) without communicating usage information.

Specific License Reservation allows entitlements, perpetual or term, to be reserved for Cisco Expressway product Instance. A generated authorization code from Cisco Smart Software Manager can be installed on the Expressway product and no regular synchronization is needed if product runs within specified license consumption.

Ability to reserve license on Cisco Smart Software Manager is through Smart Account profile.

For details on how to configure Cisco Specific License Reservation, see the section on *Specific License Reservation* in [Cisco Expressway Administrator Guide \(X14.2\)](#).

### *Additional Information and Limitations*

Expressway in *Specific License Reservation* mode implements the following:

- The licenses are shared across the Expressway nodes in a Cluster.
- License usage is reported to local Smart Agent in the Expressway.

For details on how to configure Cisco Smart Licensing, see the chapter on *Smart Licensing*, section *Additional Information, Limitation* in [Cisco Expressway Administrator Guide \(X14.2\)](#).

### **Configuration Details**

For details on how to configure Cisco Smart Licensing, see the chapter on *Smart Licensing* in [Cisco Expressway Administrator Guide \(X14.2\)](#).

## **Preview Features**

Some features in this release are provided in “preview” status only, because they have known limitations or incomplete software dependencies. Cisco reserves the right to disable preview features at any time without notice.

Preview features should not be relied on in your production environment. Cisco Technical Support will provide limited assistance (Severity 4) to customers who want to use preview features.

### **Hardware Security Module (HSM) Support - Withdrawn from X14.2 release**

The Expressway X12.6 release has added HSM functionality, as a **Preview** feature. (HSM safeguards and manages digital keys for strong authentication and provides crypto processing for critical functions such as encryption, decryption, and authentication for the use of applications, identities, and databases.)

Although the **Maintenance > Security > HSM configuration** page is still visible in the Expressway User Interface in this version of Expressway software, this functionality is withdrawn and will be removed from the user interface in the future software releases.

## Headset Capabilities for Cisco Contact Center – MRA Deployments

This feature applies if you deploy Expressway with Mobile and Remote Access. It is currently provided in Preview status only.

New demonstration software now provides some Cisco Contact Center functions on compatible Cisco headsets. From X12.6, Expressway automatically supports these new headset capabilities as a preview feature, if the involved endpoint, headset, and Unified CM are running the necessary software versions. The feature is enabled from the Unified CM interface and you do not need to configure anything on Expressway.

More information is available in the white paper [Cisco Headset and Finesse Integration for Contact Center](#).

## Push Notifications with Mobile Application Management Clients - MRA Deployments

This feature applies if you deploy Expressway with Mobile and Remote Access. It is currently provided in Preview status only.

With this feature, push notification support over Mobile and Remote Access now includes support for Mobile Application Management (MAM) clients like Jabber Intune and Jabber BlackBerry. As a result, the push notification service is available for all devices that are running Jabber Intune and Jabber BlackBerry clients.

## Push Notifications with Android Devices – MRA Deployments

This feature applies if you deploy Expressway with MRA. In X12.6 it was introduced in Preview status only, due to external product version dependencies.

In X12.6.2, the feature was switched off by default due to a known issue (bug ID [CSCvv12541](#) refers).

In X12.7, bug ID [CSCvv12541](#) was fixed. However, this feature remains in Preview status for now, due to pending software dependencies.

### How to enable push notifications for Android devices

This feature is enabled through the Expressway command line interface. Only do this **if all IM and Presence Service nodes that service Android users are also running a supported release**.

The CLI command is: `xConfiguration XCP Config FcmService: On`



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**Note** IM and Presence services for users who are currently signed in over MRA will be disrupted when this command is used, so those users will need to sign in again.

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## KEM Support for Compatible Phones - MRA Deployments

We have not officially tested and verified support over MRA for the Key Expansion Module (KEM) accessory for Cisco IP Phone 8800 Series devices. However, we have observed under lab conditions that KEMs with multiple DNs work satisfactorily over MRA. These are **not** official tests, but in view of the COVID-19 crisis, this may be useful information for customers who are willing to use an unsupported preview feature.

SIP path headers must be enabled on Expressway, and you need a Unified CM software version that supports path headers (release 11.5(1)SU4 or later is recommended).

## REST API Changes

The REST API for Expressway is available to simplify remote configuration. For example, by third party systems such as Cisco Prime Collaboration Provisioning. We add REST API access to configuration, commands, and status information as new features are added, and also selectively retrofit the REST API to some features that were added in earlier versions of Expressway.

The API is self-documented using RAML, and you can access the RAML definitions at <https://<ipaddress>/api/raml>.

**Table 6: List of REST API(s)**

Configuration APIs	API Introduced in Version
CDB Rest API Access - Enable/Disable CDB REST API Access	X14.2
Service Select Wizard	X14.0.3
Ability to acknowledge active Alarms	X14.0.3
Ban/Unban an IP Address	X14.0.3
Exempt an IP Address	X14.0.3
Call Detail Record (CDR) Configuration	X14.0.3
Status - fail2banbannedaddress	X14.0.2
SNMP Configuration	X14.0.1
Alarms - view and acknowledge	X14.0.1
Dedicated Management Interface (DMI)	X12.7
Diagnostic Logging	X12.6.3
Smart Licensing	X12.6
Clustering	X8.11
Smart Call Home	X8.11
Microsoft Interoperability	X8.11
B2BUA TURN Servers	X8.10
Admin account	X8.10
Firewall rules	X8.10
SIP configuration	X8.10
Domain certificates for Server Name Identification	X8.10
MRA expansion	X8.9

Configuration APIs	API Introduced in Version
Business to business calling	X8.9
MRA	X8.8

## Other Changes in this Release

### X14.2.6 and X14.2.7 release(s)

#### Software Download Folder Path



**Note** The software download folder and path **APPLY** to both Unrestricted (Capped Version) and Restricted (Uncapped Version).



**Important** Cisco Expressway is available in the software download folder on [software.cisco.com](https://software.cisco.com)

#### Path:

1. From the **Downloads Home > Unified Communications > Communications Gateways > Expressway Series > Expressway**.

Or

From the **Downloads Home > Unified Communications > Communications Gateways > Expressway Series > Expressway Select**.

2. Select a **Software Type - Expressway Core and Edge**.

For more information, see [Cisco Expressway Administrator Guide \(X14.2\)](#).

#### Smart Licensing Export Compliance – Restricted (Uncapped Version)



- Note**
- Product Activation Keys (PAK) Licensing (Option Keys) are removed from Cisco Expressway X14.2 release.
  - Smart License is default and the **only** licensing mode for Expressway-C and Expressway-E.

Table 7: Comparison of the Smart Licensing Features Supported in the Product

	Cisco Expressway Select	Cisco TelePresence Video Communication Server (VCS)	Notes
CAP of 2500 secured/crypto sessions	No	From X14.2.5, Expressway and Expressway Select is not supported on the Cisco TelePresence Video Communication Server (VCS) series. The end of the software maintenance release date was 29-December 2022.	
Support Advanced Account Security (AAS) and FIPS140-2 Cryptographic Mode	Yes		By adding/installing appropriate Option keys you have an option to <b>enable</b> AAS and FIPS140-2 feature(s).
Smart Licensing	Yes	Cisco has announced <b>end-of-sale</b> and <b>end-of-life</b> dates for the Cisco TelePresence Video Communication Server (VCS) product. Details are available at the following <a href="#">link</a> .	

**X14.2.6 release****get\_edge\_config response**

From X14.1 release, `get_edge_config` response contains IP addresses instead of Fully Qualified Domain Name (FQDN).

**X14.2.5 release****Smart Licensing Export Compliance****Signaling to no more than 2500 endpoints****Note**

- The Export Limit of 2500 registrations/calls/sessions is *On* by default for all customers. This means that now every customer will **not** be able to create more than 2500 encrypted connections.
- Encrypted signaling sessions to endpoints' is capped at 2500.
- Product Activation Keys (PAK) Licensing (Option Keys) are removed from Cisco Expressway X14.2 release.
- Smart License is default and the **only** licensing mode for Expressway-C and Expressway-E.





**Important** There are cases where Expressway does not have sufficient information available to determine if 2 encrypted signaling sessions are from the same endpoint. For example, with Jabber where Expressway sees separate SIP and XMPP registrations (separate encrypted signaling sessions) and is unable to determine if they are from a single endpoint. This is double counted.

So, a customer with 2200 Jabber users may think that it is fine to upgrade. But, after upgrading to X14.2, this will be seen as 4400 signaling sessions and they will get registration and calls rejected.

**Table 8: Comparison of the Smart Licensing Features Supported in the Product**

	Cisco Expressway	Cisco TelePresence Video Communication Server (VCS)
CAP of 2500 secured/crypto sessions	Yes Regardless of the licensing model (Smart Licensing or PAK) a CAP of 2500 secured/crypto sessions are applicable when upgraded to X14.2 release.	X14.2.5 is not supported on the Cisco TelePresence Video Communication Server (VCS) series. The end of the software maintenance release date was 29-December 2022.
Support Advanced Account Security (AAS) and FIPS140-2 Cryptographic Mode	No	Cisco has announced <b>end-of-sale</b> and <b>end-of-life</b> dates for the Cisco TelePresence Video Communication Server (VCS) product. Details are available at the following <a href="#">link</a> .
Smart Licensing	Yes	

For more information, see [Cisco Expressway Administrator Guide \(X14.2\)](#).

### Mix cluster deployment with Expressway and Expressway Select



**Note** Expressway clusters consisting of Expressway and Expressway Select peers are not supported. Instead, all peers within a cluster must either run the Expressway software image or the Expressway Select software image.

### X14.0.9 and X14.2.1 release(s)

#### Jabber Over MRA intermittently plays Ringing Tone instead of Busy, when called Extension is Busy

A new CLI command is added that specifies the maximum delay of a SIP REFER message. It contains DtLineBusyTone during initial call dialog (ensure SIP messages proceeds in a sequence) that the server can handle (in milliseconds).

Expressway processes and sends SIP messages (REFER contain DtLineBusyTone parameter and 183 Session Progress), which causes Jabber Over MRA to intermittently play Ringing Tone instead of Busy Tone (bug ID [CSCwc27302](#) refers).

Recommend adjust delay between 100-200 milliseconds.

The CLI command is: **xConfiguration SIP Advanced BusytoneReferDelay: <0..2000>**

## X14.2 release

### TLS Verification Mode

We have enabled server certificate verification by default when communication happens between VCS(ATS) and CUCM/CUP/JabberGuest/UNITY/CMS. When the customer upgrades to release 14.2, CA of CUCM/CUP/JabberGuest/UNITY/CMS server certificate should be present in VCS CA trust store. If the customer wishes to disable/enable server certificate verification, following is the command.

```
xConfiguration EdgeConfigServer VerifyOriginServer: OFF/ON
```

### Smart Licensing Export Compliance

#### Signaling to no more than 2500 endpoints



#### Note

- The Export Limit of 2500 registrations/calls/sessions is *On* by default for all customers. This means that now every customer will **not** be able to create more than 2500 encrypted connections.
- Encrypted signaling sessions to endpoints' is capped at 2500.
- Product Activation Keys (PAK) Licensing (Option Keys) are removed from Cisco Expressway X14.2 release.
- Smart License is default and the **only** licensing mode for Expressway-C and Expressway-E.



#### Important

There are cases where Expressway does not have sufficient information available to determine if 2 encrypted signaling sessions are from the same endpoint. For example, with Jabber where Expressway sees separate SIP and XMPP registrations (separate encrypted signaling sessions) and is unable to determine if they are from a single endpoint. This is double counted.

So, a customer with 2200 Jabber users may think that it is fine to upgrade. But, after upgrading to X14.2, this will be seen as 4400 signaling sessions and they will get registration and calls rejected.

**Table 9: Comparison of the Smart Licensing Features Supported in the Product**

	Cisco Expressway	Cisco TelePresence Video Communication Server (VCS)	Notes
CAP of 2500 secured/crypto sessions	Yes	Yes	For both platforms regardless of the licensing model (Smart Licensing or PAK) a CAP of 2500 secured/crypto sessions are applicable when upgraded to X14.2 release.

	Cisco Expressway	Cisco TelePresence Video Communication Server (VCS)	Notes
Support Advanced Account Security (AAS) and FIPS140-2 Cryptographic Mode	No	Yes By adding/installing appropriate Option keys you have an option to <b>enable</b> AAS and FIPS140-2 feature(s).	
Smart Licensing	Yes	No	For Cisco VCS, Option keys /PAK license mode only

For more information, see [Cisco Expressway Administrator Guide \(X14.2\)](#).

### Enabling or Disabling CDB API Access

Considering the Security of the Expressway product, access to CDB API has been disabled by default. They can be enabled or disabled using the Web User Interface or through REST API. You can enable or disable access to CDB REST API using the following REST API: <https://%3CIP%20address%3E/api/provisioning/common/cdbrestapiaccess>.

For more information, see [Cisco Expressway Administrator Guide \(X14.2\)](#).

### Support for 4+1 and 5+1 Redundancy Models

Expressway supports the 4+1 and 5+1 redundancy models. Each cluster can have up to four or five Expressway nodes and a maximum of N+1 physical redundancy.

### XCP Routing Table

This improvement displays the content of the Extensible Communications Platform (XCP) routing table. This content is a complete data dump of the XCP routing information contained in Cisco Jabber. This information is useful for debugging from the XCP point of view. It is made available both in the **routing.xml** file on the VCS device and in the **developer.xcp.jabber logs**.

Additionally, the ConnectionManager information is also available as a data dump through developer logs. This information displays the state of ConnectedSockets and FailedRequests counters.

All this information will help administrators to check the routing information, the number of connections, and details of each Jabber client connection.

### Reducing Email Notifications

The purpose of this improvement is to stop spamming the administrator with emails if, for some reason, multiple alarms are raised over a short period.

If the same alarm is raised two or more times within an hour, emails will be sent only once. If the same alarm gets lowered, and raised again, email will be sent, regardless of the time passed. Obviously, this only applies when the administrator has configured to receive email notifications on a device.

### Alternate Method of Using xCommand FIPS

- **Expressway Series:** FIPS functionality is not supported through CLI command and Web User Interface.
- **Cisco VCS:** You must add JOO Option Key in **Maintenance > Option keys** in **Add option key** field (or using CLI command). The options available for FIPS (*<leave/enter/status>*) are only visible before adding the JOO Option Key. You can use the JOO Option Key only after it is added.




---

**Note** Smart Licensing is FIPS compliant.

---

### Cipher Preferences - ECDSA Cipher Preference Over RSA

ECDSA certificates are preferred over RSA.




---

**Important** The following points lists the various upgrade path(s) that are mandatory for upgrading ciphers.

1. When upgrading from version lower than 14.0 to 14.2, the ECDSA would be preferred. If you prefer RSA certificates over ECDSA, then prefix the cipher string with “ECDHE-RSA-AES256-GCM-SHA384:” using either Web User Interface (**Maintenance > Security > Ciphers**) or CLI command (**xConfiguration Ciphers**).
  2. When upgrading from version equal or higher than 14.0 to 14.2 or higher version, you have appended “ECDHE-RSA-AES256-GCM-SHA384:” to the default Ciphers List to prefer RSA certificates over ECDSA. If you prefer ECDSA certificates over RSA, then remove “ECDHE-RSA-AES256-GCM-SHA384:” from the cipher string using Web User Interface (**Maintenance > Security > Ciphers**) or CLI command (**xConfiguration Ciphers**).
  3. Any customer has a fresh install of X14.2 image, ECDSA is being preferred. If you prefer RSA certificates over ECDSA, then prefix the cipher string with “ECDHE-RSA-AES256-GCM-SHA384:” using either Web User Interface (**Maintenance > Security > Ciphers**) or CLI command (**xConfiguration Ciphers**).
- 

### Support for TLS 1.3

From X14.2 release onwards, Expressway supports TLS 1.3 for SIP and Reverse proxy functionality.

### Auto Created CE Zone Status

Expressway versions prior to X14.0.2 show a status of **Active** for CE zones where the Zone Profile had Monitor Peer status / Neighbor Monitor set to **No** - since the Expressway is not monitoring the peer status for the CE zones, the more accurate status of **Address Resolvable** is indicated.

Auto-created UC zones and associated Unified Communications zone profile are not customizable and Neighbor Monitor set to **No** is by design.

Starting with Expressway X14.0.2, auto-created CE (tcp/tls/OAuth) Zone destined for the UC node will show status as **Address Resolvable** as per a fix for [CSCup29823](#).

## Traffic Server Enforces Certificate Verification



**Important** Before upgrading from pre-X14.0.2 release to X14.2, make sure the following certificate requirement is met.

Due to improvements in the traffic server service on Expressway, beginning in X14.0.2, the following must be in place for MRA.

**Requirement** - The Certificate Authority (CA) which signed the Expressway-C certificate must be added to the *Tomcat-trust* and *CallManager-trust* list of Cisco Unified Communications Manager (UCM), even if the UCM is in **non-secure** mode. Restart the following services on CUCM side:

- Tomcat Service
- CallManager Service
- HA Proxy Service (if using TLS on Tomcat)

**Reason** - The traffic server service in Expressway sends its certificate whenever a server (UCM) requests it. These requests are for services running on ports other than 8443 (for example, ports 6971, 6972, and so on). This enforces certificate verification even if UCM is in non-secure mode.

For more information, see [Mobile and Remote Access Through Expressway Deployment Guide](#).

## Known Issues and Workarounds

### Upgrade failure due to "Unique index collision" error

From X14.2.1 release, duplicate entries are not allowed in the CDB table **serviceConfiguration**. Due to this, upgrades from a previous version (which have duplicate entries in 'serviceConfiguration' table) fail with the below error.

**Error:** Upgrade fails with the following error in developer logs.

```
"Unique index collision: The value already exists in the table"  
Table="serviceConfiguration"
```

**Cause:** A 'UNIQUE' qualifier is introduced on the 'name' field of the table.

Due to this, upgrades from any previous version (which have duplicate entries in the 'serviceConfiguration' table) to a version higher or equal to X14.2.1 fails with a unique index collision error.

**Solution:** For technical assistance, contact Cisco Technical Assistance Center (TAC) team for a workaround script to delete duplicate entries before retrying the upgrade (bug ID [CSCwd38155](#) refers).

## Troubleshooting

### CUCM Cipher Interop with Expressway

Servers during Transport Layer Security (TLS) handshake send Rivest Shamir Adleman (RSA)/Elliptic Curve Digital Signature Algorithm (ECDSA) ciphers. Expressway, as a client, can accept these ciphers.




---

**Note** Fresh install of Expressway comes default with ECDSA ciphers.

---

Expressway can negotiate an ECDSA cipher request.

**Remember**

- Certificate cipher with RSA, UCM sends either a *CallManager* or a *Tomcat* certificate.
  - Certificate cipher with ECDSA, UCM sends either a *CallMananager-ECDSA* or a *Tomcat-ECDSA* certificate.
  - Users must sequentially upload, to Expressway-C, signed Unified Call Manager (UCM) certificates as trusted Certificate Authority (CA) to verify the received certificate from UCM.
- 

**Reference Information**

- **For Cipher Configuration:** Configuring ECDSA followed by RSA ciphers.

```

ECDHE-ECDSA-AES128-GCM-SHAdefault:EC DHE-ECDSA-AES128-SHAdefault:EC DHE-ECDSA-
AES128-SHA:EC DHE-ECDSA-AESdefault-GCM-SHA384:EC DHE-ECDSA-AESdefault-
AES128-SHA:EC DHE-ECDSA-AESdefault-GCM-SHA384:EC DHE-ECDSA-AESdefault-
GCM-SHA384

```

- **For Configuration in Expressway**

Add the below Ciphers under **Maintenance > Security > Ciphers**.




---

**Note** The following cipher change is required to send ECDSA as a high preference.

---

```

EECDH:EDH:HIGH:-
AES256+SHA:!MEDIUM:!LOW:!3DES:!MD5:!PSK:!eNULL:!aNULL:!aDH

```

## Limitations

### Some Expressway Features are Preview or Have External Dependencies

We aim to provide new Expressway features as speedily as possible. Sometimes it is not possible to officially support a new feature because it may require updates to other Cisco products which are not yet available, or known issues or limitations affect some deployments of the feature. If customers might still benefit from using the feature, we mark it as “preview” in the release notes. Preview features may be used, **but you should not rely on them in production environments** (see **Preview Features Disclaimer**). Occasionally we may recommend that a feature is not used until further updates are made to Expressway or other products.

## Open and Resolved Issues

Follow the links below to read the most recent information about the open and resolved issues in this release.

- [All open issues, sorted by date modified \(recent first\)](#)

- [Issues resolved by X14.2.7](#)
- [Issues resolved by X14.2.6](#)
- [Issues resolved by X14.2.5](#)
- [Issues resolved by X14.2.2](#)
- [Issues resolved by X14.2.1](#)
- [Issues resolved by X14.2](#)

## Using the Bug Search Tool

The Bug Search Tool contains information about open and resolved issues for this release and previous releases, including descriptions of the problems and available workarounds. The identifiers listed in these release notes will take you directly to a description of each issue.

### To look for information about a specific problem mentioned in this document:

1. Using a web browser, go to the [Bug Search Tool](#).
2. Sign in with a cisco.com username and password.
3. Enter the bug identifier in the **Search** field and click **Search**.

### To look for information when you do not know the identifier:

1. Type the product name in the **Search** field and click **Search**.
2. From the list of bugs that appear, use the **Filter** drop-down list to filter on either *Keyword*, *Modified Date*, *Severity*, *Status*, or *Technology*.

Use **Advanced Search** on the Bug Search Tool home page to search on a specific software version.

The Bug Search Tool help pages have further information on using the Bug Search Tool.

## Obtaining Documentation and Submitting a Service Request

Use the [Cisco Notification Service](#) to create customized flexible notification alerts to be sent to you via email or by RSS feed.

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see [What's New in Cisco Product Documentation](#).

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the [What's New in Cisco Product Documentation RSS feed](#). The RSS feeds are a free service.

## Appendix 1: Get More Information

There are additional resources you can access to get help and find more information.

## PID Details



- Note**
- The list of PIDs in the table below applies to both Unrestricted (Capped Version) and Restricted (Uncapped Version).
  - The following PIDs **A-SW-EXPWY-14X-K9** and **A-SW-EXPWY-14XU-K9** are found under A-FLEX-3 PID.

Product Identifier (PID)	Description	Path on CCO
A-SW-EXPWY-14X-K9	Restricted, can exceed 2500 signaling sessions	<b>Products &gt; Cisco Products &gt; Unified Communications &gt; Communications Gateways &gt; Cisco Expressway Series &gt; Cisco Expressway Select</b>
A-SW-EXPWY-14XU-K9	Unrestricted has a cap of 2500 signaling sessions	<b>Products &gt; Cisco Products &gt; Unified Communications &gt; Communications Gateways &gt; Cisco Expressway Series &gt; Cisco Expressway</b>
L-EXPWY-14.X-K9=	0\$ PID, Restricted, can exceed 2500 signaling sessions for existing customers who need to upgrade to uncapped image	<b>Products &gt; Cisco Products &gt; Unified Communications &gt; Communications Gateways &gt; Cisco Expressway Series &gt; Cisco Expressway Select</b>
L-EXPWY-PLR-K9=	PLR for Expressway	<b>Products &gt; Cisco Products &gt; Unified Communications &gt; Communications Gateways &gt; Cisco Expressway Series &gt; Cisco Expressway Select</b>

## Ordering Guide

For details, see [Cisco Collaboration Flex Plan 3.0 \(Flex 3.0\) Ordering Guide](#).



- Note**
- On CSSM, in the **Create Registration Token** page, the **Allow export-controlled functionality on the products registered with this token** check box is not applicable to Expressway images.
  - Ensure the Quantity of 0\$ PID should equal the number of nodes.



## Appendix 2: Accessibility and Compatibility Features

A Voluntary Product Accessibility Template (VPAT<sup>®</sup>) is a document that explains how information and communication technology (ICT) products such as software, hardware, electronic content, and support documentation meet (conform to) the Revised 508 Standards for IT accessibility.

For details, see [Current VPAT Documents](#) → **TelePresence**.

